ABSTRACT OF THE DISCLOSURE

There is disclosed an electronic single pole double throw switch which completely replaces a prior art mechanical switch. The mechanical switch normally exists in a suitable vehicle, such as an aircraft or any device, but basically has three output terminals. Two terminals are associated with a first and a second lamp, which lamps have one terminal coupled to an operating voltage. Essentially, in order to replace the mechanical switch, an electronic switch also is wired to the three terminals exactly as a mechanical switch would be so wired. The electronic switch has two states. In each state, one of the lamps is on and the corresponding switch is closed. In this state, the other lamp is off, with its corresponding switch open. This operation is the same operation as that of the mechanical switch. In the electronic switch, the voltage, which is at the output terminal of the lamp that is off, is utilized to drive a low voltage regulator which operates electronic circuitry associated with the electronic switch. The electronic switch contains a timing oscillator which produces a pulse of a narrow interval. This narrow pulse is utilized to supply operating potential to a piezoresistive bridge circuit. The activation of the bridge circuit causes the bridge circuit to produce an output during the pulse interval, which output is directed to a differential amplifier and then to a comparator. The comparator receives an operating voltage during the pulse interval and compares the pressure of the bridge circuit against a threshold pressure. If this threshold pressure is exceeded, the comparator causes a flip-flop to change state. The flip-flop has first and second outputs, each coupled to an associated switching circuit. Each switching

circuit will activate an associated lamp to cause the lamp to illuminate when the flip-flop is in a given state. The state of the flip-flop can be changed during the next pulse interval if the pressure applied to the bridge circuit changes.

PTN\42415.1